Illinois Environmental Protection Agency · 2125 South First Street, Champaign, IL 61820

217-333-8361

February 3, 1993

Briggs Industries, Inc. (Crawford Co.)
Reconnaissance Inspection

Ernest Flowers, Plant Manager
Briggs Industries, Inc.
1000 W. Pine
Robinson, IL 62454

Dear Mr. Flowers:

On December 30, 1992, Eileen Cronin representing this Agency conducted an inspection of the Briggs Industries Wastewater Treatment Plant (WWTP). Larry Corder and David James were interviewed during this inspection; we appreciate the time and courtesy they extended to Ms. Cronin.

Based on this inspection and a review of our files, it appears your company's procedures for storage and disposal of solids generated at the WWTP may not comply with the current environmental regulations. Briggs Industries has been referred to the Agency's Division of Land Pollution Control for further investigation of WWTP solids-handling procedures.

Agency files indicate the floor drains in the manufacturing plant are tributary to the storm sewer running under the building. We strongly recommend the floor drains be disconnected from the sewer, since they provide a pathway for spills inside the building to reach the creek to which the storm sewer discharges.

If you have any questions about this inspection, please contact Ms. Cronin at (217) 333-8361.

Very truly yours,

ENVIRONMENTAL PROTECTION AGENCY

Joseph A. Koronkowski

Joseph A. Koronkowski, P.E.
Manager, Champaign Region
Bureau of Water
Division of Water Pollution Control

JK:EC:jp3822p

cc: Albert Evelin, City of Robinson

bcc: DLPC-Champaign
DWPC/RU ✓

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY MEMORANDUM

DATE: December 30, 1992

TO: DWPC/RU ✓

FROM: Eileen Cronin, WPC - Champaign EMC

SUBJECT: Briggs Industries, Inc./Robinson (Crawford Co.)
Reconnaissance Inspection

On 12/30/92 I made an unannounced inspection at Briggs Industries, a manufacturer of porcelain bathroom fixtures. I was accompanied by Albert Evelin, City of Robinson Sewer Plant Superintendent, and Robert Goff, WWTP employee; we had been conducting a survey of local industries' sanitary sewers, so I invited them to stick around for an inspection of Briggs' WWTP.

We arrived at approximately 10:30 am and asked to speak with the person responsible for general environmental compliance. We were met by Ernest Flowers, Plant Manager; he told us Environmental Manager Mike Tomlinson was on vacation, so there was no one to escort us around the WWTP. I told him the purpose of my visit was to check out the plant and collect samples of the effluent and the solids being stored on the plant grounds;

Corder showed us around the WWTP and did his best to answer my questions. While we were there, Operator David James (Class K) showed up. I got the impression he does much of the day-to-day work at the plant, as he was able to readily answer my questions on plant operations, etc. After talking briefly with Corder and James, I collected my samples and departed immediately afterwards.

BACKGROUND INFORMATION

This facility has been in operation under various owners since 1918. Briggs Manufacturing, a division of Celotex Industries, purchased the Robinson Plant from Case Plumbing about 1972. Agency records (1987) indicate employment to be about 300; I didn't ask about shifts worked, etc. during this inspection. According to 1973 permit review notes by

Richard Forbes, the porcelain fixtures are made of "slip", a mixture of barium carbonate, sodium carbonate, sodium silicate, and water. After mixing, the slip is screened and a magnet is used to remove iron particles; the slip is then poured into molds and allowed to dry. Once dry, the fixtures are sprayed with glaze (ingredients listed in Attachment E), then placed in kilns and baked.

Sanitary wastewater and cooling water are discharged to the City of Robinson sanitary sewers. Process wastewater is generated from washout of slip make-up tanks, screenings from raw glaze and slip, two wet grinders, and waste material from clay and glazes. The process wastewater is batch-treated on site through chemical addition followed by settling; clarified wastewater is discharged to an unnamed tributary of Robinson Creek that I call "Briggs Ditch" (and will henceforth refer to as such). The inorganic, claylike sludge that settles in the clarifiers is drawn off to earthen sludge lagoons to allow further settling/dewatering. Sludge is periodically removed from the lagoons and piled on the ground adjacent to them; it is also sometimes removed for off-site disposal as discussed later in this report.

Status of Unpermitted NCCW Discharge

In 1979, Joe Koronkowski (WPC-Champaign) discovered an unpermitted discharge of non-contact cooling water from a pair of air compressors to a "storm sewer" via the plant floor drains. (Actually, this sewer carries Briggs Ditch under the plant and resurfaces about 1-1/2 blocks northeast--see Attachment B.) According to Region files, this discharge was still in existence as of 1984, but Corder told me Briggs had eventually eliminated it by switching to air-cooled compressors. The building floor drains are still tributary to the sewer, though. I pointed out to Corder that any material spilled in the plant would probably reach Briggs Ditch via the floor drains. He agreed it was a possibility, but claimed most of the drains are actually clogged by debris. I suggested that, clogged or not, the floor drains should be routed elsewhere.

Summary of "Incidents" Documented in Region Files

A review of the WPC and LPC files on this facility revealed what seems to be an inordinately high number of pollutional incidents of varying degrees of seriousness.

2/20/81 - Fuel oil spill

Briggs reported a spill of between 500 and 900 gallons of fuel oil from a 150,000 gallon tank to the tributary of Robinson Creek. The company responded by placing booms downstream and cleaning up the spill, but they also steadfastly maintained (in the face of circumstantial evidence to the contrary) the material was in fact cutting oil from E.H. Barre, a neighboring industry. Agency testing later showed this claim to be false.

6/15/81 - Complaint of white material in creek

Two residents complained that every evening at about 6:00 pm a slug of white material discolored the unnamed creek for about three hours. An employee of the Robinson WWTP suggested the source might be milk from Heath Candy (now Leaf, Inc.), but the complainants said the nightly slugs had no odor, did not cause fish kills or other lasting effects, and resembled an inert clayey substance similar to materials used at Briggs. Also, Heath didn't (and still doesn't) have any known point source discharges.

6/17/81 - PCB incident

Workers mistook pyronal, a transformer oil, for herbicide and sprayed it on a weedy area on the south side of Briggs' property. Soon afterward the company realized the pyronal had contained PCBs and reported the contamination to the Agency; soil samples collected 7/81 showed PCB concentrations of up to 37 ppm in the vicinity of the sprayed area. Site investigations were conducted 10/84 by IEPA/DLPC and 6/87 by a USEPA contractor. Based on Region files, it doesn't appear an approved cleanup was ever performed; the 1987 report for USEPA notes a building was under construction in the contaminated area at the time, and the topsoil had been removed during excavation of the foundation. The report does not give any explanation as to what was done with the soil, though.

1/30/84 - Oil leak from compressor

Bruce Girkin (WPC-Champaign) noted oil in the catch basin on the sewer carrying Briggs Ditch under the plant. He alerted company personnel, who determined the material was No. 1 fuel oil that had leaked from an air compressor fuel pump, overfilling a drip pan and draining to a nearby floor drain. Briggs personnel estimated the quantity lost at 5-15 gallons.

9/17/84 - Complaint of white material in creek

A resident complained that Briggs had discharged a white material that was discoloring the unnamed creek. John Applegate (WPC-Champaign) called the facility and was told a hose had broken, resulting in a spill of 100-150 gallons of glaze to a floor drain. In its followup letter, the company told a slightly different story, explaining a hose broke and an employee placed it out a window, resulting in the glaze being pumped to a storm drain.

4/6/90 - Complaint of white material in creek

This complaint was relayed by IDPH/Marion. No followup was conducted by Region staff, so no information is available on the specifics of this incident.

8/8/91 - Leaking underground storage tank (gasoline)

Company personnel discovered water had infiltrated a leaky 500-gallon UST used to store gasoline. IESDA (now IEMA) was notified, and the company replaced the damaged tank with a new one after having the site remediated by a contractor.

8/25/92 - Leaking underground storage tank (diesel fuel)

Briggs discovered 6000 gallons of diesel fuel had leaked from an underground storage tank and reported it to IEMA on 8/25/92. Per phone call to Becky Lockhart (DLPC/LUST) on 1/8/93, the company had filed the required 20-Day Discovery Report, but was late with its 45-Day Report; therefore, no information was available on corrective action as of this writing.

GENERAL INFORMATION

Responsible Officials:

Ernest Flowers, Plant Manager	(618) 544-2151
Michael Tomlinson, Environmental Manager	" " "
David James, WWTP Operator	" " "

Address and Phone Number:

Robinson Plant:

Briggs Industries, Inc.
1000 W. Pine
Robinson, IL 62454
(618) 544-2151

Corporate Offices:

Briggs Industries, Inc.
4350 W. Cypress St., Suite 800
Tampa, FL 33607
(813) 878-0178

Plant Location: South of Route 33 on the southwest side of Robinson.
Legal description: Section 33, T.7N., R.12W., Robinson Twp., Crawford Co.

Receiving Waters: Discharge is to "Briggs Ditch" (my name), a tributary of Robinson Creek, a tributary of Sugar Creek. The receiving stream is characterized as general use; its 7Q10 is 0 cfs. The stream originates at a catch basin just south of Briggs' property and the adjoining railroad tracks. According to a 2/21/81 memo from Applegate, a field tile and two storm drains from E.H. Barre discharge to the catch basin.

Plant Personnel and Certification Status: James holds a Class K license and thus is properly certified to operate Briggs' WWTP. According to the CAS operator printout, he is the only certified operator currently employed by Briggs.

Plant Staffing: Not evaluated.

NPDES PERMIT REQUIREMENTS

NPDES Permit IL0004154 became effective 11/22/85 and expired 8/1/90. A renewal application was received 1/31/90 but has not yet been acted upon, so the expired permit remains in effect. It authorizes one discharge, Outfall 001; limited parameters are:

Outfall 001

PARAMETER	LOAD LIMITS [lbs/day] 30-day avg.	LOAD LIMITS [lbs/day] daily max.	CONCENTRATION LIMITS [mg/l] 30-day avg.	CONCENTRATION LIMITS [mg/l] daily max.	SAMPLE FREQUENCY	SAMPLE TYPE
Flow [MGD]					1/month	
pH	Shall be in range 6.0 to 9.0				1/month	grab
TSS			15	30	1/month	24-hour composite
TDS	See Special Condition 3				1/month	24-hour composite

Special Condition of note:

3. States that the TDS concentration in the effluent shall be limited to a level that will not cause a violation of the WQ standard specified in §302.208 (i.e., 1000 mg/l).

Neither Briggs nor the Agency monitors the receiving stream, so no information is available as to whether the company is in compliance with this condition. Dissolved solids concentrations reported on DMRs are generally in the range of 500-600 mg/l, so Briggs is probably in compliance since there are no known contributors of TDS upstream of its discharge.

WASTEWATER TREATMENT PLANT

General Description:

Treatment units consist of:

- dual 150 gpm waste slurry pumps
- dual Walker Process clarifiers
- dual sludge lagoons

Wastewater flows by gravity from the plant to the slurry pump wet well. From there it is pumped into one of the clarifiers, which are operated alternately. Once the clarifier is full, alum and polymer are added manually and the wastewater is allowed to settle; after 3-4 hours, discharging is initiated. Any additional wastewater received from the facility during the settling process is directed to the other clarifier.

Sludge from each clarifier is transferred to the associated sludge lagoon via a valved gravity line. Supernatant drains back to the waste slurry pump pit; the lagoons reportedly do not have underdrains. One lagoon is cleaned out each year; sludge is removed and placed on the ground directly adjacent to the lagoons.

On the date of my visit, there was a second flexible hose at the ditch bank next to Outfall 001. The hose was hooked to a portable pump but was not discharging. James said he uses the pump to speed up emptying of the clarifiers; gravity discharge via Outfall 001 (a 4"(?) PVC pipe) isn't always fast enough to allow the plant to keep up with incoming flows.

SOLIDS HANDLING AND DISPOSAL

Sludge removed from the lagoons is left in piles on the plant site and allowed to dry. Briggs has accumulated a fairly significant quantity of this material, covering most of the land around the WWTP with anywhere from 1 ft to more than 10 ft of sludge. (Sludge is probably a misleading term for these solids. They most resemble a sticky clay when wet (as when I saw and sampled them), and reportedly get relatively hard when dry.) The solids are piled on the banks of Briggs Ditch and right up to the fence marking the property line; some runoff must occur, but I didn't see any evidence of unnatural conditions arising as a result.

I learned that some of the stockpiled material had recently been hauled away by Beryl Mehler, a local trucker. (Mehler also hauls what is supposed to be bottom ash from CIPS' Hutsonville power plant, and some cinders had been put down on Briggs' sludge pile to provide traction.) Corder said Mehler had put the sludge in a landfill on his property, and that all necessary testing had been done beforehand. (I got the impression the testing consisted of a TCLP analysis).

I discussed this situation with Jim Conlon, DLPC-Springfield, on 1/7/93. His office received a complaint concerning Mehler's operations some time in 1990 (prior to the opening of DLPC's Champaign Office). Mehler's trucking firm was found to be hauling broken and off-spec ceramic material from Briggs and dumping it in a low, swampy area on his property. The Agency made Mehler stop doing this and obtain a permit from IDOT allowing him to cover the "landfill" with topsoil. Conlon said Mehler had recently submitted photos showing the dump site had been covered as required; based on what I was told during my inspection, sludge from Briggs was also used as part of the cover material.

Since this sludge is a pollution control waste, and thus a special waste, disposal in Mehler's "landfill" is technically illegal. The Agency has little data on the sludge except for the recent TCLP results and an analysis done in 1972. Based on this very limited amount of data, it appears the material is inert and fairly innocuous, so the sludge disposed on Mehler's property wouldn't be expected to pose a pollutional threat. However, two reservations are noted: (1) the characteristics of the sludge should be confirmed by additional testing and (2) any further disposal activity of this nature should be halted immediately, harmless or not, because it's illegal.

Briggs won't be able to pile the sludge on its property indefinitely; eventually the company is going to have to identify a valid disposal method or "recycling project" and get rid of at least some of it. In addition to being an unsightly and anachronistic practice, these sludge hills may prove to be more trouble than they're worth in the long run for the following reasons:

1. If Briggs is considering this to be on-site disposal pursuant to §21(d) of the Act, the company may now be subject to relatively strict landfill rules pursuant to 35 Ill. Adm. Code 815.

2. The presence of the sludge piles obliges Briggs to obtain a storm-water permit. The company submitted an NOI form for a general storm-water permit 11/92; no other action has been taken to date.

NPDES PERMIT COMPLIANCE

Permit: Satisfactory. When reissued, the receiving stream should be changed to "unnamed tributary of Robinson Creek."

Flow Measurement: Not evaluated.

Sampling: Not evaluated.

Laboratory: Not evaluated.

Records: Not evaluated.

Reports: Not evaluated. Facility DMRs don't have any obvious problems except for failure to write in the actual sample type and frequency. They are being signed by Flowers.

Self-Monitoring Program: Not evaluated.

Effluent: Satisfactory, based on data available at this time. Summaries of DMR data and Agency grab sampling results are given in Attachments F and G. These show Briggs to be in compliance with applicable limitations. However, it should be noted that (1) the Agency doesn't get many grab samples at this facility due to the intermittent nature of Briggs' discharge and the relative remoteness of Robinson, and (2) the parameters being tested are fairly limited.

Receiving Stream: Not evaluated, though no obvious problems were noted downstream of the WWTP or the plant. I collected stream samples of Briggs Ditch and other streams in Robinson on 1/11/93; results and discussion may be found in the memo written on that project (see file: Crawford County - Sugar Creek Basin).

Operations and Maintenance: Not evaluated.

Sludge Disposal: Unsatisfactory, for reasons discussed earlier.

O & M Recommendations:

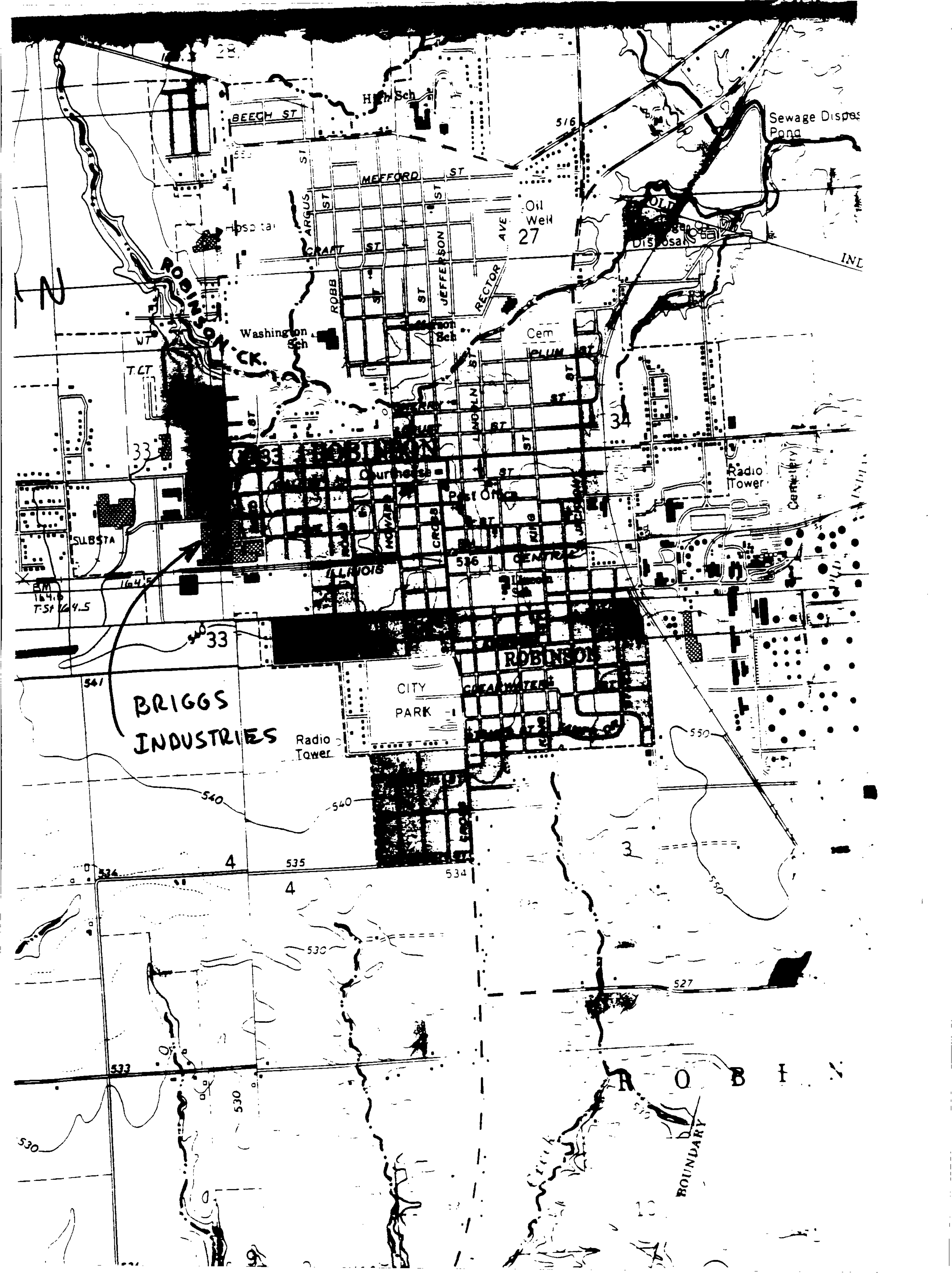
1. Disconnect the facility floor drains from the storm sewer.

2. Develop a plan for regular disposal and/or recycling of the WWTP sludge to reduce or eliminate the quantity stockpiled on-site.

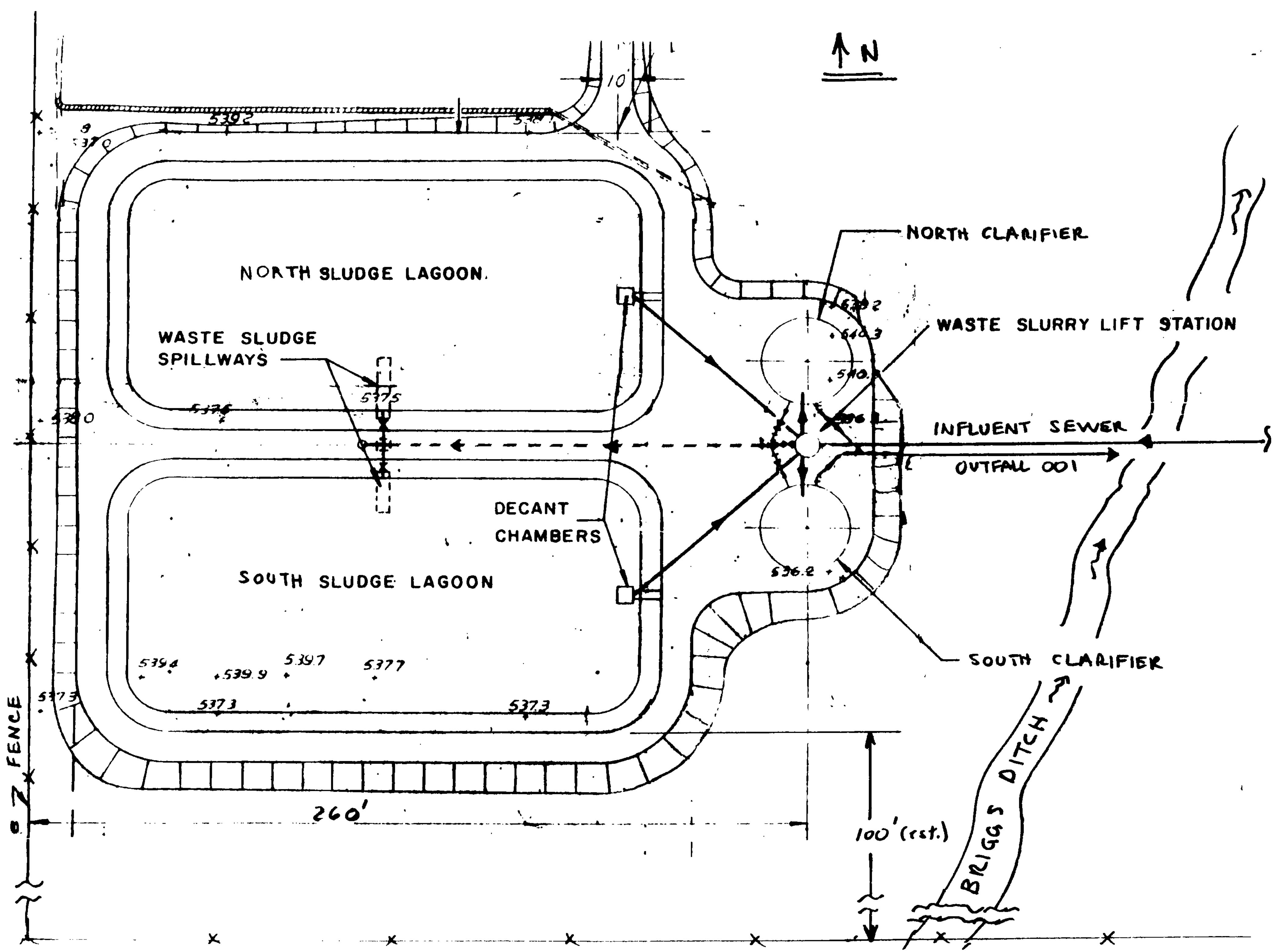
EC:jp3803p

Attachment A - Vicinity Map
B - Site Sketch
C - Plant Layout
D - Flow Schematic
E - Constituents of Slip and Glaze
F - DMR Summary
G - Agency Grab Sample Summary
H - Inspection Sample Results (to follow)
I - Copies of photos taken 1-11-93

cc: LPC-Champaign



BRIGGS INDUSTRIES
ROBINSON
ROBINSON CK.
High Sch
BEECH ST
MEFFORD ST
ARGUS ST
CRAFT ST
ROBB ST
JEFFERSON ST
RECTOR AVE
Oil Well
27
Hospital
Washington Sch
Cem
PLUM ST
Sewage Disposal Pond
Disposal
Courthouse
Post Office
ILLINOIS
CENTRAL
Radio Tower
Cemetery
SUBSTA
CITY PARK
Radio Tower
33
34
4
3
BOUNDARY
R O B I N


N
10'
539.2
NORTH CLARIFIER
NORTH SLUDGE LAGOON.
WASTE SLUDGE SPILLWAYS
537.5
537.6
538.0
WASTE SLURRY LIFT STATION
540.3
540.0
INFLUENT SEWER
OUTFALL 001
DECANT CHAMBERS
SOUTH SLUDGE LAGOON
536.2
SOUTH CLARIFIER
539.4
539.9
539.7
537.7
537.3
537.3
537.3
FENCE
260'
100' (est.)
BRIGGS DITCH

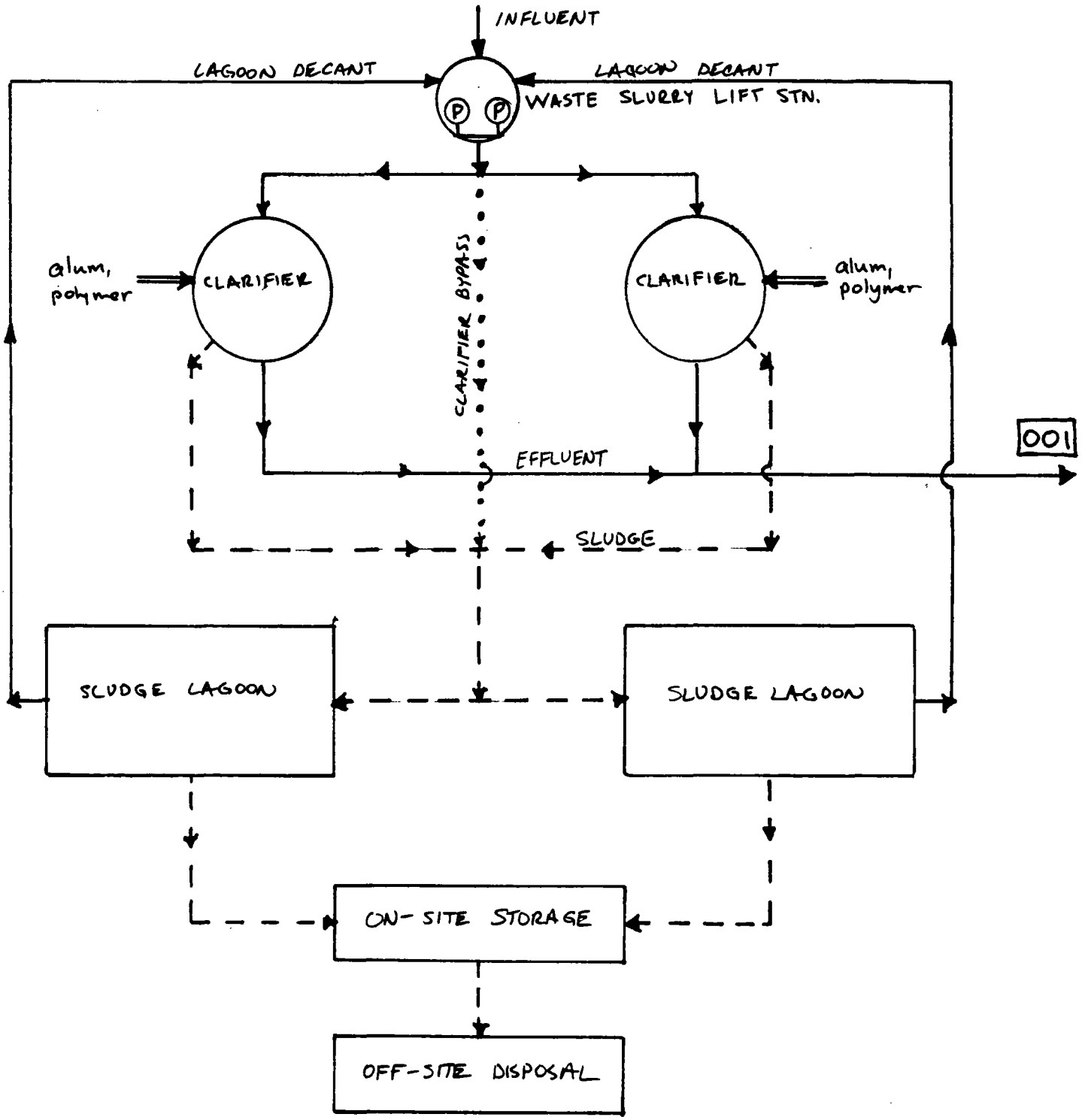
STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY

IL 532-0357
ADM 39
054-002

Subject BRIGGS INDUSTRIES

Data Flow Schematic

Reviewed by Eric Date 1/21/93



ATTACHMENT E

CONSTITUENTS OF SLIP AND GLAZE *

SLIP = barium carbonate
sodium carbonate
sodium silicate

GLAZE = feldspar [$Na_2O \cdot Al_2O_3 \cdot 6SiO_2$]
flint
limestone [$CaCO_3$]
barium carbonate
talc [$MgO \cdot SiO_2$]
zinc oxide
zirconium silicate
clay
frit
color oxides

* per 1973 permit review notes by Richard Forbes

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY

IL 532 0357
ADM 39
054-002

Subject Briggs Industries

Data DMR Summary: 1/92-12/92

Reviewed by FMC Date 1/20/93

YR	MO	FLOW [MGD]	TSS [lbs/day]	TSS [mg/L]	TDS [mg/L]	PH [S.U.]
92	12	.045	1.46	3.88	576	6.8
	11	.092	9.0	11.7	580	6.9
	10	.045	5.0	13.3	592	7.0
	09	.092	8.24	10.74	505	6.9
	08	.092	1.09	1.42	560	7.0
	07	.047	1.29	3.3	540	6.9
	06	.047	0.95	2.42	610	7.0
	05	.045	2.9	7.75	490	6.9
	04	.092	3.42	4.44	523	7.0
	03	.092	6.75	8.82	570	6.8
	02	.092	2.84	3.7	496	6.9
	01	.045	0.60	1.6	445	6.9

PERMIT. NPC 15/30 WQ* 6-9

* TDS concentration in effluent shall not cause [illegible] of WQ std (1,000 mg/L) in receiving stream.

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY

IL 532 0357
ACM 39
054-002

Subject Briggs Industries

Agency Grab Sample Summary 8/89 - Present

Reviewed by ENC Date 1/21/93

				← [mg/L] →			[SU]	[mg/L]
time	YR	MO	DAY	BOD_5	TSS	TDS	pH	NH_3N
14:45	89	08	17	1	10	866	7.4	<0.1
13:20		09	19	1	9	513	7.6	<0.1
13:30	90	10	15	- NO	DISCHARGE			
12:00	91	04	17	- NO	DISCHARGE			
8:35	92	03	10	2	6	446	7.4	<0.02
15:05		05	19	- NO	DISCHARGE			
8:10		05	20	- NO	DISCHARGE			
14:45		08	26	- NO	DISCHARGE			
9:45		08	27	<1	10	556	7.4	<.01

PERMIT NPC 15/30 NPC

* TDS concentration in effluent is not cause violation

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY

IL 532-0357
ADM 39
054-002

Subject Briggs Industries

Data DMR Summary: 1/92 - 12/92

Reviewed by FSNC Date 1/20/93

YR	MO	FLOW [MGD]	TSS [lbs/day]	TSS [mg/L]	TDS [mg/L]	PH [S.U.]
92	12	.045	1.46	3.88	576	6.8
	11	.092	9.0	11.7	580	6.9
	10	.045	5.0	13.3	592	7.0
	09	.092	8.24	10.74	505	6.9
	08	.092	1.09	1.42	560	7.0
	07	.047	1.29	3.3	540	6.9
	06	.047	0.95	2.42	610	7.0
	05	.045	2.9	7.75	490	6.9
	04	.092	3.42	4.44	523	7.0
	03	.092	6.75	8.82	570	6.8
	02	.092	2.84	3.7	496	6.9
	01	.045	0.60	1.6	445	6.9

PERMIT: NPC 15/30 WQ* 6-9

* TDS concentration in effluent shall not cause of WQ std (1000 mg/L) in receiving stream

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY

IL 532-0357
ADM 39
054-002

Subject: Briggs Industries
Agency Grab Sample Summary 8/89 - Present
Reviewed by: ENC Date: 1/21/93

				← [mg/L] →			[SU]	[mg/L]
time	YR	MO	DAY	BOD_5	TSS	TDS	pH	NH_3N
14:45	89	08	17	1	10	866	7.4	<0.1
13:20		09	19	1	9	513	7.6	<0.1
13:30	90	10	15	- NO	DISCHARGE			
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8:35	92	03	10	2	6	446	7.4	<0.02
15:05		05	19	- NO	DISCHARGE			
8:10		05	20	- NO	DISCHARGE			
14:45		08	26	- NO	DISCHARGE			
9:45		08	27	<1	10	556	7.4	<.01
				PERMIT:	NPC	15/30	WQ*	6-9	NPC

* TDS concentration in effluent shall not cause violation

Subject: Briggs Industries – Sludge piles
Photo Date: 1-11-93, EMC
Photo By:
Comments: Photo from south (EH Baare driveway) To give scale, the fence in the foreground is at least 6' high. Snow was 1-2" deep on this date. Roof of Leaf, Inc is visible at left

Subject: As above
Photo Date:
Photo By:
Comments: As above

Subject: As above
Photo Date:
Photo By:
Comments: Photo from west, Sludge visible at right. The south sludge lagoon is visible at center, and the south clarifier is behind it

Subject: Briggs Industries
Photo Date: Sludge Piles
Photo By: 1-11-93 EMC
Comments:

Photo from west. This shows sludge that's be piled on the northwest part of Briggs' property

Subject: As above
Photo Date:
Photo By:
Comments: ~~As~~ above The fence and the building give an indication of the height of the pile (est 12-15')

Subject:
Photo Date:
Photo By:
Comments: